

YAKOBSON, M.O., doktor tekhn. nauk; BYLOV, B.D., inzh.

Estimating the level of the development of technological
processes in mechanical processing. Trakt. i sel'khozmash.
33 no.7:39-42 J1 '63. (MIRA 16:11)

PESHKOV, Yevgeniy Onisimovich; YAKOBSON, M.O., nauchn. red.;
ABOLEMOV, V.P., red.; NESMYSLOVA, L.M., tekhn. red.

[Machining on turret lathes] Rabota na tokarno-revol'-
vernykh stankakh. Moskva, Proftekhizdat, 1964. 283 p.
(MIRA 17:4)

TERGAN, Vladimir Semenovich; LIBERMAN, Boris Sergeyevich; GENIS,
Boris Mikhaylovich; YAKOBSON, M.Q., nauchn. red.GORYUNOVA,
L.K., red.
[Surface grinding] Ploskoe shlifovanie. Moskva, Vys-
shaia shkola, 1964. 318 p. (MIRA 17:11)

YAKOBSON, M.O., doktor tekhn. nauk, prof., red.; SEMENOVA, M.M.,
red.izd-va; TIKHANOV, A.Ya., tekhn. red.

[Unified system for planned preventive maintenance and ef-
ficient operation of technological equipment in the machinery
industry] Edinaia sistema planovo-predupreditel'nogo remonta
i ratsional'noi ekspluatatsii tekhnologicheskogo oborudovaniia
mashinostroitel'nykh predpriiatii. Izd.5. Moskva, 1964. 582 p.
(MIRA 17:3)

YAKOBSON, M.O.; FUNBERG, A.L.

Technological processes in the manufacture of precision machine tools. Stan. i instr. 35 no.1:28-32 Ja '64. (MIRA 17:3)

YAKOBSON, N.

84-9-25/47

AUTHOR: Yakobson, N., Chief of TKB of the Vnukovo LERM
TITLE: For Excellent Maintenance of Jet Aircraft (Za otlichnoye obsluzhivaniye reaktivnoy tekhniki)
PERIODICAL: Grazhdanskaya Aviatsiya, 1957, Nr 9, pp. 25-27 (USSR)
ABSTRACT: The article reports on servicing the Tu-104 in the airline repair and maintenance workshop of the Vnukovo airport. A special division, whose chief is comrade Stepanov, has been created for this purpose. This division has its own laboratory equipped mainly for detection of defects. Otherwise the division is divided into two shops, one of which does heavy jobs, such as change of engines or the 100-hour maintenance. The new "three crews" system insures an almost uninterrupted service; a complete 24-hour schedule is being considered. Thus far, each day two crews work and one rests. The article lists the norm/hours and "relative units" which must be spent for over-haul and maintenance jobs of a Tu-104. By the "relative unit" the article means the amount of work requested for the post-flight service of a piston-engine aircraft (~~not specified further.~~) These norm/hours and "units" read as follows: 100-hour service - 700 norm/hours and 38 "units"; 50-hour service - 360 and 19.5; ПП-2 (probably post-flight) service - 50 and 2.7; ПП-1-32 and 1.7; pre-flight service - 25 and 1.4; minor service (in Russian specified as "short-time") - 20 and 1.1. Another table lists the amount of norm/hours and

Card: 1/3

84-9-25/47

"For Excellent Maintenance of Jet Aircraft (cont.)

"relative units" spent on individual equipment categories in 100-hour and 50-hour service jobs. The figures in the 100-hour service read as follows: airframe - 100 norm/hours and 5.4 "units"; controls - 95 and 5.1; landing gear and hydraulic system - 100 and 5.4; cabin equipment - 60 and 3.3; power plants - 45 and 2.5; electrical equipment - 90 and 4.9; radio equipment - 100 and 5.4; instruments - 110 and 6.0. The relative figures (in the same order) for a 50-hour service read: 60 and 3.3; 60 and 3.3; 48 and 2.6; 25 and 1.4; 37 and 2.0; 50 and 2.7; 40 and 2.1; 50 and 2.1. The article mentions some improvements made or suggested by local employees, e. g. comrade Suslovarov adjusted a new device for the check-up of instruments; comrade Siluyanov replaced an АМГА-2 machine with an АТА-2. Engineer R. Bober constructed a combination trolley and support (see photo) used in replacing the Tu-104 engines. A special dock to be used in heavy jobs is urgently needed; otherwise much time is lost in moving hoists, ladders, illuminators, and other equipment to the plane. Taking the plane into and out of the hangar still depends completely on tow cars and ropes. Washing and cleaning work is still done manually.

Card: 2/3 Three photos accompany this article. One on page 25 shows the support-

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For Excellent Maintenance of Jet Aircraft (cont.)

trolley constructed by engineer R. Bober. The photo on page 26 shows 4 men mounting the wing flap (of the Tu-104); the four men, referred to as a "special brigade" under the leadership of aircraft technician I. Sysenko, are (from left to right): I. Sysenko, technician V. Zan'kov, mechanic F. Baranov, and technician V. Demidenko. The photo on page 27 shows V. Suslovarov and Ye. Malashkin assembling a machine for checking speedometers and transformers. The machine is Suslovarov's invention. Suslovarov is the foreman in the instrument laboratory of the Vnukovo airport LERM.

AVAILABLE: Library of Congress

Card: 3/3

Nachal'nik Tekhnicheskogo i Konstruktorskogo
byuro Linneyoy eksploatatsionno-kemontnyy
masterskoy Vnukovskogo aeroporta.

SOV/ 84-58-3-43/52

AUTHOR: Yakobson, N., Engineer, and Lovtsov, Yu., Engineer

TITLE: The Necessity of a Ground Equipment Maintenance Service
(Sozdat' sluzhbu nazemnogo oborudovaniya)

PERIODICAL: Grazhdanskaya aviateiya, 1958, ¹⁵ Nr 3, p. 35 (USSR)

ABSTRACT: In connection with the introduction of new flying equipment requiring more highly specialized ground facilities in airports the authors suggest the establishment of a new service, which would take care of ground equipment maintenance. Reference is made to the aviation industry, which maintains special brigades in charge of airfield ground equipment. Also, special subjects pertaining to ground equipment are proposed for inclusion in the training schedules of the Kiev Institute of Aviation Engineering, as well as for other technical aviation schools. Short term courses in operational units are suggested for introduction of the new MA-7 airfield truck, the powerful heater for the Tu-104 engines, etc.

Card 1/1 1. Airports--Equipment 2. Airports--Maintenance 3. Aviation personnel
 --Training

YAKOBSON, N., inzh.

Main airports should have mechanization areas. Grazhd. av. 20
no.3:25 Mr '63. (MIRA 16:4)

(Airports—Technological innovations)

YAKOBSON, N.A.

Prevention of dysentery in large groups of adults. Trudy TomNIIVS
(MIRA 16:2)
11:107-113 '60.
(DYSENTERY--PREVENTION)

YAKOBSON, N. B.

YAKOBSON, N. B. -- "Investigation of A. N. Larionov's Rectifying Circuit (Three-Phase Bridge Circuit) in Application to an Electric Drive." Sub 24 Jan 52, Sci Res Inst, Ministry of Electrical Industry USSR. (Dissertation for the Degree of Candidate in Technical Sciences.)

SO: VECHERNAYA MOSKVA, January-December 1952

GABLER, M.[Gabler. Miloš], inzh.; GASHKOVETS, Y.[Haškovec, Jiří], inzh.;
TOMANEK, Ye. [Tomanek, Evžen], inzh.; ROZENBLIT, D.G. [translator];
DUNAYEVSKIY, S.Ya.[translator]. Prinimal uchastiye YAKOBSON, N.B.,
kand. tekhn. nauk, red.; ARENBERG, N.Ya., red.; SVESHNIKOV, A.A.,
tekhn. red.

[Magnetic amplifiers] Magnitnye usliliteli. Pod red. S.IA.Dunaevskogo. Moskva, Izd-vo "Sovetskoe radio," 1961. 449 p. Translated from the Czech. (MIRA 14:11)

(Magnetic amplifiers)

YAKOBSON, N.B.; YAMPOL'SKIY, S.M.

[Use of silicon power rectifiers in electric drives;
from materials of the ASEA firm] Primenenie silovykh
upravliaemykh kremnievykh ventilei v elektroprivode;
po materialam firmy ASEA. Referativnaia informatsiia.
Moskva, Izd-vo TsINTL, 1963. 23 p. (MIRA 16:9)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po
avtomatizatsii i mashinostroyeniyu.
(United States--Electric driving)
(United States--Silicon diodes)

BELYAYEV, Ye., kand.tekhn.nauk; YAKOBSON, N., inzh.

New type of bridge with a flexibel design layout. Prom. stroi. i inzh.
soor. 5 no.2:49-50 Mr-Ap '63. (MIRA 16:4)
(Cranes, derricks, etc.—Design and construction)

DUNAYEVSKIY, S.Ya., kand.tekhn.nauk (Moskva); YAKOBSON, N.B., kand.tekhn.
nauk (Moskva)

Regulation of the angular velocity of an asynchronous motor using
in opposition connected magnetic amplifiers in the rotor circuit.
Elektrichestvo no.12:51-55 D '62. (MIRA 15:12)
(Electric motors, Induction) (Magnetic amplifiers)

D'YACHKOVA, L. N.; DAVYDOVA, T. V.; YAKOBSON, N. K.

Participation of mitochondria in the formation of synaptic vesicles. Dokl. AN SSSR 147 no. 6:1467-1469 D '62.
(MIRA 16:1)

1. Institut morfologii zhivotnykh im. A. N. Severtsova AN
SSSR. Predstavлено академиком A. N. Bakulevym.

(MITOCHONDRIA) (CEREBRAL CORTEX)

ACCESSION NR: AP4035482

S/0051/64/016/005/0899/0901

AUTHOR: Chayka, M.P.; Yakobson, N.N.

TITLE: Filter for optical pumping of cesium vapor

SOURCE: Optika i spektroskopiya, v.16, no.5, 1964, 899-901

TOPIC TAGS: gas laser, laser pumping method, optical filter, cesium

ABSTRACT: For effective optical pumping to one of the hyperfine sublevels of the ground state of alkali metal vapors one must use light in which the intensity of the hyperfine components does correspond to the intensity rule. In the present paper there is proposed an appropriate selective filter based on a Fabry-Perot interferometer. This is diagrammed in the figure (Enclosure 01). The present filter was designed specifically for pumping to one of the hyperfine sublevels of the ground state of cesium, but the parameters can obviously be modified for other pumping purposes. The Fabry-Perot interferometer consists of a fused quartz plate with a multilayer, dielectric reflecting coating on both sides (reflection coefficient about 67%). "The coatings were applied in the laboratory of T.N.Krilova." The lens 2 focuses the light on the ring diaphragm. This consists of a series of alternating

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ACCESSION NR: AP4035482

transparent and opaque rings (the glass plate is first coated with silver and then with black varnish and the double coating is removed with a brass cutter to form the transparent rings). The number of rings that can be used is limited: at a distance of 10 orders from the center the line shifts by half an order relative to the next and the selectivity is impaired. The filter assembly must be maintained at constant temperature. Alignment of the diaphragm, however, is easy. Estimates of the efficiency of the given filter indicate that about 9% of the useful light is stopped by the filter and about 9% of the unwanted light is transmitted. The various advantages of the filter are discussed. Orig.art.has: 5 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 05Jun63

DATE ACQ: 22May64

ENCL: 01

SUB CODE: OP, EC

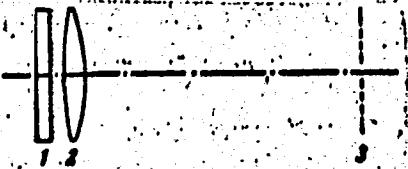
NR REF Sov: 000

OTHER: 009

Card 2/3

ACCESSION NR : AP4035482

ENCLOSURE: 01



Interferometric filter: 1) Fabry-Perot plate,
2) lens, 3) ring diaphragm.

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L 61667-65 ENT'D BY CIA
ACCESSION NR: AP5011131

UR/0051/65/018/004/0715/0717

539.162

AUTHOR: Yakobson, N. N.

TYPE: Theory of the hyperfine magnetic sublevels of the hyperfine structure under modulation of the external magnetic field. ¹⁹

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 715-717

TOPIC TAGS: hyperfine structure, magnetic sublevel, external field modulation, dipole moment modulation, multi quantum transition, density matrix

ABSTRACT: The author verified experimentally the theoretically deduced fact that if the magnitude of the dipole moment of a transition varies periodically with time, in the direction of polarization of the alternating field inducing the transition, then additional lines are observed in the spectrum. Various effects that produce such a modulation are discussed and expressions are derived for the density matrix in the interaction representa-

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L 61667-65

ACCESSION NR: AP5011131

tion for resonance signals obtained by optical detection of transitions between hyperfine levels. The experiments were performed with the transition ($F = 3, m_F = 0; F = 4, m_F = 0$) of the ground state of Cs. The transitions were recorded by an optical detection method described by Bell and Bloom (Phys. Soc., A67, 55, 1954), an interference filter being used to suppress one of the hyperfine spectrum components of the light in the spectra lamp so as to enhance the sensitivity of the method. The test procedure is described briefly. The experimental confirmation of the effect was accurate to 10 per cent. 'The author thanks V. I. [redacted] for a discussion of the results and for assistance in the work.' Original article has: 4 formulas

ASSOCIATION: None

SUBMITTED: 16 Jun 64 [redacted] ENCL: 00 SUB CODE: OP

NR REF Sov 001 OTHER: 008

Card 2/2

YAKOBSON, V.B., kand.tekhn.nauk

Energy losses in hermetic system compressors. Khol.tekh. 42 no.2:4
Mr-Ap '65. (MIRA 18:5)

1. Vsegoznyy nauchno-issledovatel'skiy institut kholodil'nyy
promyshlennosti.

YAKOBSON, N. S.

Brain - Surgery

Foreign bodies in the cranial region. Khirurgiia, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952 Unclassified.

L 12827-63

EWT(1)/ENG(k)/ENP(q)/EWT(m)/BDS/T-2/EEC(b)-2/ES(t)-2

AFFTC/ASD/ESD-3

Pz-4/Pm-1 ID/LPF(C)

ACCESSION NR: AT3003023

S/2927/62/000/000/0295/0300

AUTHOR: Tuchkevich, V. M.; Uvarov, A. I.; Yakovchuk, N. S.

77

TITLE: Fluctuations of the reverse conductance in germanium and silicon rectifiers
[Report at the All-Union Conference on Semiconductor Devices, Tashkent, 2-7 Oct.,
1961]SOURCE: Elektronno-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo
AN UzSSR, 1962, 295-300

TOPIC TAGS: germanium rectifier, silicon rectifier

75

ABSTRACT: Continuous operation of high-power germanium rectifiers (including the industrial water-cooled VG-500, 500 amp, 100 v type) was investigated. Due to visible surface short-circuits, the Soviet rectifiers broke down at any time, from a few minutes to a few months of continuous operation. It was found that a continuously applied reverse voltage of 100 v dc causes failure while a short-time 200 v is safe. Further studies revealed that the breakdown was connected with fluctuations of the reverse conductivity, and the latter was due to the presence of moisture on the rectifier surface. Fluctuations were accurately measured, and

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L-12827-63

ACCESSION NR: AT3003023

the corresponding curves are presented in the article. The following recommendations are offered: (1) each branch of the rectifying circuit should include at least two Ge rectifiers in series; (2) a high-resistance voltage divider should be used. The authors consider their work as preliminary. Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: OO

SUB CODE: PH, GE

DATE ACQ: 15 May 63

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2

14-57-7-15228

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,
p 163 (USSR)

AUTHOR: Yakobson, N. Z.

TITLE: Tularemia Infection Transmitted Through Water (O
vodnom puti zarazheniya tulyaremiyey)

PERIODICAL: Tr. Tomskogo n.-i. in-ta vaktsin i syvorotok, 1956,
Vol 7, pp 199-201

ABSTRACT: Tularemia infection through infected water is common
in Novosibirsk Oblast. In the summer of 1954 first
cases of this disease appeared in July, when the river
flood was at its peak. At that time epizootic tula-
remia was observed in water rats. Humans became
infected chiefly when they came in direct contact
with water rats in the course of their work, and also
while bathing, fishing, washing clothes, etc.
The author describes seven cases of tularemia, the

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14-57-7-15228

) Tularemia Infection Transmitted Through Water (Cont.)

causes of which were traced to sluggish bodies of water infested by water rats. Of those infected, three developed buboes of the submaxillary and supermaxillary lymphatic glands; two in the groin, and two in the armpit. The author concludes that the infection came from direct contact with the water and not through the alimentary system.

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T. D.

KRASNOV, M.D., polkovnik meditsinskoy sluzhby; YAKOBSON, N.Z., podpolkovnik meditsinskoy sluzhby; VASILENKO, Ye.F., podpolkovnik meditsinskoy sluzhby; GULIMOVA, L.A.; OPANASENKO, A.S.

Aerial dusting in the control of ticks. Voen.-med.zhur. no.8:42-45
Ag '59. (MIRA 12:12)
(TICKS)

PLEASE I BOOK EXPLORATION.

307/1146

Transactions of the Turk Scientific Research Institute of Medicine

WILLIAMSON, VOL. 44, NO. 1, JANUARY 1967. ISSN 0043-165X. \$1.00 U.S. AND CANADA,
\$1.20 ELSEWHERE.

EDITOR: This collection of articles is intended for biologists, physicians,
Dr. E. C. GALT (Secretary); Dr. M. M. HARRIS; Dr. J. M. HOGG (President); Prof.
M. L. GUTHRIE.

COVERAGE. The collection contains 15 papers on problems of epidemiology and 16 by medical personnel.

biology and 33 reports on the theory and practice of immunology. To avoid repetition of names or organizations in the table of contents the following affiliations will be abbreviated: Towson University-Lawrenceville, "My Institute"

Volume 1 entitled "Chemical Sciences Research Institute of Victoria and Services" was issued in October 1960. This volume contains a detailed account of the work of the Chemical Sciences Research Institute of Victoria and its services to the medical and dental services of Victoria. The Institute is a research organization which carries out research in the fields of medicine, dentistry, pharmacology, toxicology, and other related sciences.

Medical Research Council, Medical Institute of the Royal Department of Antropology.

J. "Pope," H. L. Igolman and Mr. P. Pedersen (*Toronto Inst. Inst.*).

Carriers of Tick-Borne Viral Illnesses

Formation of Natural Bidi of Infection in Western Siberia
T. T. Tsvetkov and A. N. Tsvetkov (Institute of Tropical Diseases, Tomsk Medical)

Parasitology and Propylaxis of Tick Eosinophilia in the Frank Islands During the 1957 Season

8. "Derm., A.R.", J.J. Ignatius, and Yu. V. Fedorov. Data Pertaining to the Characteristics of the One-jerk Niche of Tick Encephalitis 322

9. Ершевская, В.М. Гармо-аллергия облитерирующей артерии и ее эпидемиология. Гаджийя Фарзилья (Гармо-аллергия [autoimmune] облитерантной артерии).

and Epidemiology Station). Meeting Spring-Summer Tick Encephalitis and Lyme Disease Alert.

10. *Prostaphilus*, R.L., V. Pechter, M.S. Zuckerman, and E.R. Johnson (Rockefeller Institute Clinic for Infectious Diseases of the Rockefellar Institute). Specific Properties of a

W. H. G. - 10

II. *Hedrick, H.J. (Frank Institute). Zoogeographic Observations of the Articola Type of *Calanoida* Shells in the Mandated Rio River Valley.*

12. **Perfumey, V.M., R.P. Semyat, and N.I. Kozulin** (Tunuk Institute). Sources of Leptospirosis in Tomskaya oblast'. *Voprosy Meditsinskoy Ekologii*, No. 2, 1980.

13. "SOKOLOW, V.N., and L.P. SAGYDAK (Tomsk Institute of Trach Medical Institute). Biological Characteristics of Leptospiral Strains Iso-

lived in Tomskaya oblast.

Dr. V. I. Ignatius (Frank Institute) Frank Medical Institute).¹ [Quoted from all recent literature in Western Siberia.]

15. **Reedemer, A.A.** (Finnish Institute, National Research Council) "The Use of Induction or Large (Kerned) Cattle in Detecting Q-Fever in Sheep and Other Livestock".

16. September, A.D. (Frank Institute). Analysis of Local Data on Epizootics.

17. *Taberlin, S.L.* (Sanitation and Epidemiology Department). *Diseases* 7

19. **Frank M. Miller** (Frank M. Miller Department). Study of the

VERSATILITY OF (ABERRANT) HYDROXYBENZYLIMIDAZOLE THERAPY AND PRACTICE OF DECISION	
39. FEDDERSON, B.O. (West Institute). Immunochemical Characteristics of Polymyxins and New Complex Antibiotic-Hellmannite	1
40. FEDDERSON, B.O. (West Institute). Amphotropic Properties of Interrelated Simple and Complex Vacuolines	2

YAKORSON, N.Z.

Working with the motor dusting device "Serna-3." Med.paraz.¹
paraz.bol. no.5:619-620 '61. (MIRA 14:10)
(SPRAYING AND DUSTING EQUIPMENT)

YAKOBSON, N.Z.; OPANISENKO, A.S.

Observations on the seasonal and 24-hour activity of *Aedes*
mosquitoes in the suburban area of Novosibirsk. Med. paraz,
i paraz. bol. 33 no.1:39-40 Ja-F '64 (MIRA 18:1)

Yakobson, O. A.

YAKOBSON, O.A.; REYZIN'SH, R.E.

The use of rulers instead of recording rolls. Bum.prom.30
no.7:22-23 Jl'55. (MLRA 8:10)

1. Bumazhnaya fabrika "Ligatne"
(Papermaking machinery)

YAKOBSON O.YA.

STRAZIS, D.E.; REYZIN'SH, R.E.; YAKOBSON, O.Ya.

Continuous pulp beating with rollers. Bum.prom. 29 no.10:15-16
(MIRA 7:11)
O '54.

1. Bumazhnaya fabrika "Ligatne"
(Papermaking machinery)

YAKOBSON, P. [Jakobsons, P.]

Permeability of skin blood vessels in patients with chronic
eczema and psoriasis before and after treatment at the Kemer
Health Resort. Izv. AN Latv. SSR no.5:121-126 '63.
(MIRA 17:1)

YAKOBSON, P. kandidat pedagogicheskikh nauk.

Training for technical creativity. Prof.-tekhn. obr. 12 no.1:20-23
(MLRA 8:3)

J '55.
(Technical education)

YAKOBSON, P.M.

Psychological peculiarities of constructive activity of 7th class
students. Vop. psichol. 2 no. 3:73-86 My-Je '56. (MIRA 9:9)

mlv
1. Institut psichologii Akademii pedagogicheskikh nauk RSFSR, Moskva.
(Child study)

YAKOBSON, P. M.

YAKOBSON, P.M., dotsent

Power of emotions. Zdorov'e 3 no.7:12-14 Jl '57.
(EMOTIONS)

(MLRA 10:8)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2

YAKOBSON, PAVEL MAKSIMOVICH

IV
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1958

PSIKHOLOGIYA CHIVSTV (PSYCHOLOGY OF FEELING) 2. DOP. IZD. MOSKVA, IZD-VO
AKADEMI I PEDAGOGICHESKIH NAUK RSFSR, 1958.
381, (3) P. ILLUS., DIAGRS.
AT HEAD OF TITLE: AKADEMIYA PEDAGOGICHESKIH NAUK RSFSR. INSTITUT PSIKHOLOGI.
"LITERATURA": P. 378-382

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2"

YAKOBSON, R. M.

Some results of work done at the Institute of Psychology of the
Academy of Pedagogical Sciences of the R.S.F.S.R. in 1957. Vop.
psichol. 4 no.3:178-181 My-Je '58
(MIRA 11:8)
(PSYCHOLOGY)

SOV/27-58-11-12/29

AUTHOR:

Yakobson, P., Candidate of Pedagogical Sciences

TITLE:

The Students' Technical Way of Thinking (Tekhnicheskoye myshleniye uchashchikhsya)

PERIODICAL:

Professional'no-tehnicheskoye obrazovaniye, 1958, Nr 11,
pp 13 - 15 (USSR)

ABSTRACT:

The exhibits of students' works and especially those at the Vsesoyuznaya vystavka tekhnicheskogo tvorchestva uchashchikhsya (All-Union Exhibition of Students Creative Technical Work) have proved that the scope of technical problems developed by students of the Labor Reserves has widened, and that the answer to them has become more elaborated. The author mentions an electronic computing machine manufactured by students of the Tekhnicheskoye uchilishche Nr 4, Penza, (Penza Technical School Nr 4) and the model of an electrified railroad section with a double-sided automatic blocking, and a despatcher and desk control, made by students of the Technical School Nr 6, Taganrog. The present process of training better develops the students' interest for technical problems. At the plants, cells are being established by the Vsesoyuznoye obshchestvo izobretateley i ratsionalizatorov (All-Union Society of Inventors and Efficiency Experts),

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The Students' Technical Way of Thinking

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which will enable the graduates of Labor Reserve schools to participate in this type of work. The author divides the students, young workmen and technicians, into two groups. The "executives" belong to the one category and to the other belong those "with initiative". After defining the "executive" type of workman, and the one "with initiative", the author deals with the question of developing the students' technical way of thinking, which has so far not been properly reflected in the training activity, although foremen, instructors and methodologists (e.g. T. Voskoboinikov, V. Gel'man, Yankovskiy, etc) have recommended and applied valuable methods for developing a creative impulse among students. The display of a creative approach to technical problems may often be attributed to the student's technical capabilities. However, there are also several important points which ensure the development of the students' creative way of thinking. They are contained in the very methods of acquiring technical knowledge, in the methods of teaching and in the character of the adopted intellectual habits of thinking. The author gives a closer definition of the latter concept and explains how a technical way of thinking can be noticed in a student. He analyzes the forms of thinking and acting, and calls attention to the operations of synthesis, since

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The Students' Technical Way of Thinking

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the features of a creative approach to engineering manifest themselves especially distinctly in the operations of the synthesis. The author quotes a few examples showing a low and high level of students' thinking and its peculiarities, and comes to the conclusion that it is necessary to raise the activity of students' thinking by carrying out theoretical tasks.

1. Industrial training
2. Personnel--Performance

Card 3/3

YAKOBSON, P.M.

Experimental study of moral feelings and moral evaluation
among school children. Vop. psichol. 6 no.4:23-34 Jl-Ag
'60. (MIRA 13:9)

1. Institut psichologii Akademii pedagogicheskikh nauk RSFSR,
Moskva. (Moral education)

YAKOBSON, P., kand.pedagogicheskikh nauk

Technical abilities, their formation and development. Prof.-tekhn.
obr. 19 no.10:23-25 0 '62. (MIRA 15:11)
(Technical education)

JAKOBSON, P. V.

Perspektivy primeneniia teplovozov na zheleznykh dorogakh SSR. /The outlook for the development of Diesel locomotives on the railroads of the U.S.S.R. (Zheo-dor. transport, 1945, no. 10-11, p. 21-30, diagrs.).

DLC: HE7.25

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

ZAKOBSON, P. V.

Teplovozy i perspektivy primenения их на земельных дорогах СССР. Diesel
locomotives and the prospects for their use on the railroads of the U.S.S.R.
Radiolektsiia. Moskva, Transzhelizdat, 1946. 13 p. (Ministerstvo putei
soobshcheniya. Upr. ucheb. zavedeniiam. TSentr. kinoradiobaza).

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress
Reference Department, Washington, 1952, Unclassified.

EUFRIANSKIY, N., doktor tekhn.nauk; YAKOBSON, P., kand.tekhn.nauk

Use of diesel locomotives on U.S. railroads. Zhel.dor.transp.
36 no.5:90-92 My '55. (MIRA 12:5)
(United States--Diesel locomotives)

Yakobson, P.V.

SHISHKIN, Kirill Aleksandrovich, professor; GUREVICH, Abram Matanovich,
kandidat tekhnicheskikh nauk; STEPANOV, Aleksandr Dmitriyevich,
kandidat tekhnicheskikh nauk; PLATONOV, Yevgenii Veniaminovich,
inzheker; YAKOBSON, P.V., kandidat tekhnicheskikh nauk, retsenzent;
GNEZDILOV, V.B., inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskiy
redaktor

[Soviet diesel locomotives] Sovetskie teplovozy. Izd. 3-e, ispr. 1.
dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. 1956.
387 p.

(MLRA 9:12)

(Diesel locomotives)

SHELEST, Aleksey Nestorovich, zasluzhennyy deyatel' nauki i tekhniki,
doktor tekhnicheskikh nauk, professor [deceased]; YAKOBSON, P.V.,
kandidat tekhnicheskikh nauk, dotsent, retsenzent; SHULEST, P.A.,
kandidat tekhnicheskikh nauk, dotsent, redaktor; VOSKOBESSENSKIY,
N.N., inzhener, redaktor; TIKHANOV, A.Ya., tekhnicheskiy redaktor

[Diesel locomotives; principal processes] Teplovozy: osnovnye
processy. Pod obshchey red. P.A.Shelesta. Moskva, Gos. nauchno-
tekhn. izd-vo mashinostroit. lit-ry, 1957. 259 p. (MLRA 10:6)
(Diesel locomotives)

~~YAKOBSON, P.V., kand.tekhn.nauk; FEDOROV, V.A., kand.tekhn.nauk;~~
~~FEDOROV, V.A., kand.tekhn.nauk.~~

Diesel trains as an effective means of local and suburban
transportation. Zhel. dor. transp. 40 no.3:40-43 Mr '58.

(MIRA 11:4)

(Diesel locomotives)
(Railroads--Passenger traffic)

YAKOBSON, Petr Vasil'yevich, kand.tekhn.nauk, laureat Stalinskoy premii;
BLIZNYANSKIY, A.S., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[History of the diesel locomotive in the U.S.S.R.] Istoryia
teplovoza v SSSR. Moskva, Vses.izdatel'sko-poligr.ob"edinenie
M-va putei soobshcheniya, 1960. 209 p. (MIRA 13:11)
(Diesel locomotives)

TSAREV, B.P., inzh.; STASENKO, I.K., inzh.; SHALANIN, P.D., inzh.;
SOKOLOV, P.P., inzh.; TITOV, R.P., inzh.; YAKOBSON, R.V.,
kand.tekhn.nauk; TITOV, S.N., kand.tekhn.nauk

Determining consolidated material consumption norms for
locomotive and car repairs. Vest. TSNII MPS 20 no.6:62-64
'61.

(MIRA 14:10)

(Railroads—Repair shops)

YAKOBSON, P.V., kand.tekhn.nauk, laureat Stalinskoy prémii

Diesel trains on the railroads of foreign countries.
Zhel.-dor.transp. 43 no.9:87-92 S '61. (MIRA 14:8)
(Railroad motorcars)

YAKOBSON, P.V., kand.teknn.nauk, Laureat Gosudarstvennoy premii SSSR.

Forty years of Soviet diesel locomotive manufacture, Zhel.dor.
transp. 44 no.1:29-32 Ja '62. (MIRA 14:12)
(Diesel locomotives--Design and construction)

YAKOBSON, P.V., kand.tekhn.nauk; TITOVA, R.P., inzh.

First Soviet diesel train "Baltika." Zhel.dor.transp. 45 no.9:85-
86 S '63. (MIRA 16:9)
(Railroads—Trains) (Diesel engines)

YAKOBSON, P. YA.

USSR/Medicine - Fungus Diseases
Mycology

May/Jun 49

Cases of Microsporria in Men, Caused by Microsporum
Ferrugineum, in the Latvian SSR," P. Ya. Yakobson,
Chief, Mycol. Lab., Inst. of Experimental Med., Acad.
Sci. Latvian SSR, 1/3 p

Test Venerol i Dermatol" No 3

Microscopic examination revealed two children
with microsporon. Culture of the microsporon
in Sabouraud's culture medium indicated an ex-
ternal resemblance to that of Achorion
schubneini, but was rusty in color. Observed
intercalary and terminal chlamydospores with
149161

USSR/Medicine - Fungus Diseases
(Contd)

May/Jun 49

thickened or tooth-like mycelia under the micro-
scope. Cultures were examined by Prof Arlyevich,
Chief, Mycol Dept, Cen Dermatovenereol Inst.
Dir, Inst of Experimental Med: Prof P. I.
Stradin', Dr Med Sci.

149161

YAKOBSON, P. Ya.

YAKOBSON, P. Ya. -- "Experience in Organizing the Fight Against Fungous Diseases in the Latvian SSR." Latvian State U, 1950
(Dissertation for the Degree of Candidate of Medical Sciences)

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9, Sept., 1955

YAKOBSON, P.Ya.

[Fungous diseases of the skin] Gribkovye zabolевания kozhi. Moskva,
Medgiz, 1956. 153 p.
(DERMATOMYCOSIS) (MLRA 10:2)

YAKOBSON, P.Ya.

Changes in cutaneous and vascular reactions in chronic eczema at
the "Kemer" health resort. Vest.derm.i ven. no.12:33-37 '61.

(MIRA 15:1)

1. Iz kliniki kozhnykh bolezney (zav. - dotsent P.Ya. Yakobson)
Rizhskogo meditsinskogo instituta (dir. - prof. V.A. Kal'berg).
(ECZEMA) (SKIN) (BLOOD VESSELS)
(KEMER--HEALTH RESORTS, WATERING-PLACES, ETC.)

YAKOBSON, P. [Jakobsons, P.]

Thermoregulation and perspiration reflexes in patients
with psoriasis before and after treatment at the Kemeru
health resort, Izv. AN Latv. SSR no.10:107-111 '62.
(MIRA 16:1)

(PSORIASIS) (BODY TEMPERATURE REGULATION)
(KEMERI—HEALTH RESORTS, WATERING PLACES, ETC.)

YAKOBSON, S. A. PROF

PA 34/49T27

USSR/Medicine - Osteodystrophia, Jun 48
Fibrosa, History
Medicine - Literature, Medical

"Review of Professor Braytsev's Book, 'Osteodystrophia Fibrosa,'" Prof S. A. Yakobson, 3/4 p

"Khirurgiya" No 6

Reviews very favorably. Published by Medgiz, 1947,
150 pp, 12 rubles

34/49T27

YAKOBSON, S. A. Prof.

Surgeons

Professor Vasilii Ivanovich Razumovskiy (1857-1935). Khirurgiia No. 7, 1952

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

1. YAKOBSON, S. A., Prof.
2. USSR (600)
4. Kovanov, V. V.
7. "N. V. Sklifosovskii (1836 - 1904.)" V. V. Kovanov. Reviewed by Prof.
S. A. Yakobson. Khirurgiia, No. 12, 1952.

May 1953, Uncl.

9. Monthly List of Russian Accessions, Library of Congress,

GUREVICH, N.I., professor

"N.I. Pirogov and medical science abroad". S.A. Yacobson. Reviewed
by N.I. Gurevich. Khirurgija 32 no.1:93 J '56 (MIRA 9:6)

(PIROGOV, NIKOLAI IVANOVICH, 1810-1881)
(YAKOBSON, S.A.)

YAKOBSON, S.A., prof. (Moskva)

"Collected papers of the Ivanovo Province Surgical Society,"
no.1. Reviewed by S.A.Yakobson. *Khirurgija* 35 no.2:126-
128 F '59. (MIRA 12:5)
(SURGERY)

YAKOBSON, Sergey Abramovich

[A.G. Arkhangel'skaia, Zemstvo physician, 1851-1905] Zemskii
vrach A.G. Arkhangel'skaia, 1851-1905. Moskva, Medgiz, 1958.
(MIRA 13:4)
112 p.
(ARKHANGEL'SKAIA, ALEKSANDRA GAVRILOVNA, 1851-1905)

YAKOBSON, S. G.

YAKOBSON, S. G. - "The conditions for arousing interest in didactic stories among young school children." Moscow, 1955. Academy of Pedagogical Sciences RSFSR, Inst of Psychology. (Dissertations for degree of Candidate of Pedagogical Sciences.)

SO: Knizhnaya letopis', No 48. 26 November 1955. Moscow.

YAKOBSON, S.G.

YAKOBSON, S.G.

Sight- and touch-relation in the perception of form by pre-school children. Vop.psikh., 3 no.3:81-87 My-Je. '57. (MIAA 10:8)

1.Institut psichologii Akademii pedagogicheskikh nauk RSFSR,
Moskva. (Perception) (Sight) (Touch)

YAKOBSON, S.G.

Developing the ability of young school children to work without
distraction. Vop.psikhol. 5 no.2:77-82 Mr-Ap '59.
(MIRA 12:6)

1. Institut psichologii Akademii pedagogicheskikh nauk RSFSR,
Moskva. (Attention) (Study, Method of)

YAKOBSON, S.I.

About the article of M.G. Vladimirova and A.A. Potiev. Zhur.fiz.
(MLBA 9:8)
khim. 30 no.3:698-699 Mr '56.

1. Akademiya nauk USSR, Institut obshchey i neorganicheskoy khimii,
Kiyev.

(Chlorides) (Benzene)
(Vladimirova, M.G.) (Potiev, A.A)

YAKOBSON, S.I.

GENCHIKOV, A.F.; NIKITIN, V.K., zamestitel' nachal'nika sluzhby puti;
YAKOBSON, S.I.

The P.D.M.S. (track and roadway machinery station) carries out
major repair work. Put' i put. khos. no.5:23-27 My. '57.
(MIRA 10:6)

1. Glavnnyy inzhener Putevoy doroshnoy mashinnoy stantsii No.2
Belorusskoy dorogi (for Genchikov). 2. Nachal'nik Putevoy do-
rozhnoy mashinnoy stantsii No.2 Belorusskoy dorogi (for Yakob-
son).

(Railroads--Maintenance and repair)

YAKOBSON, S.I.

Mechanizing the laying of switches. Put' put.khoz. 8 no.2:5-7
(MIRA 17:3)

'64.

1. Zamestitel' nachal'nika Gomel'skoy distantsii Belorusskoy dorogi.

YAKOBSON, S.I.

Safer fastening of the track for protection against rail creepage.
Put' i put. khoz. 7 no.10:42 :53. (MIRA 16:12)

1. Zamestitel' nachal'nika Gomel'skoy distantsii Belorusskoy dorogi.

YAKOBSON, S.I.

Service life of ties. Put' i put.khoz. 7 no.12:40 '63.
(MIRA 16:12)

1. Zamestitel' nachal'nika Gomel'skoy distantsii Belorusskoy dorogi.

ZAYTSEV, P.I.; LIZOGUB, I.G.; PETRUKOVICH, A.A., zasl. deyatel'
nauki i tekhniki Uz.SSR; SMYKOV, Ye.K.; CHIZHOV, A.T.;
YAKOBSON, S.I.; ANDREYEV, G.Y., dots., retsenzent;
GRECHUK, V.S., dots., retsenzent; NEKHAY, V.T., red.

[Mechanization of the assembly, laying and exchange of
switches] Mekhanizatsiya sborki, ukladki i smeny strelcch-
nykh perevodov. Minsk, Vysshaia shkola, 1964. 69 p.
(MIRA 18:3)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo
transporta, kafedra "Zheleznodorozhnyy put'" (for
Andreyev, Grechuk).

May 49

YAKOBSON S. S.

USSR/Engineering
Steam Boilers

"Formation of Cracks in Boiler Drums as a Result of Installing Conical Plugs," L. D.
Ginsburgshik, Engr., N. V. Sosnin, S.S. Yakobson, Engr., 2 pp

"Elek Stants" No 5

During assembly of one boiler with a working pressure of 3½ at, it was necessary to plug extra holes in two drums. Solid conical plugs were welded into the drums for this purpose: 19 in the upper drum and four in the lower. This led to radial cracks in the drums. Suggests that use of welded conical plugs be discontinued, and that screw caps be used instead.

PA 11/15/740

YAKOBSON, S. S.

Technology

(Book for the gas welder and cutter). Pod red. Grigor'eva. Moskva, Gosenergoizdat, 1951.

2

9. Monthly List of Russian Accessions, Library of Congress, November 1953. Unclassified.

YAKOBSON, S.S.

OSTROUKHOV, G.D.; YAKOBSON, S.S., redaktor; VORONIN, K.P., tekhnicheskiy
redaktor.

[Manual on safety techniques in gas welding and cutting] Pamiatka
po tekhnike bezopasnosti dlja gazosvarshchika i gasorezchika. (V
voprosakh i otvetakh) Moskva, Gos. energ. izd-vo, 1953. 30 p.
(Welding—Safety measures)

SOSNIN, N.V.; YAKOBSON, S.S.

Electric arc welding of small diameter pipes. Elek.sta. 25 no.5:31-33 My '54.
(MLRA 7:6)

(Electric welding)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2

YAKOBSON, S.S., inzhener.

Welded joints of pipelines. Elek.sta. 25 no.12:22-23 D '54.
(Steampipes) (Welding) (MIRA 7:12)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2"

YAKOBSON, S.S.

YAKOBSON, Sergey Sergeyevich; OL'SHANSKIY, N.A., redaktor; LARIONOV,
G.Ye., tekhnicheskij redaktor.

[Welding in the installation and repair of electric power station
equipment] Svarka pri montazhe i remonte oborudovaniia elektro-
stantsii. Moskva, Gos.energ.iud-vo, 1955. 319 p. (MLRA 8:12)
(Welding)

YAKOBSON, Sergey Sergeyevich; GRIGOR'YEV, T.Ye., redaktor; MEDVERDEV, L.Ya.,
tehnicheskiy redaktor

[Manual for the gas welder and cutter] Pamiatka gazosvarshchika i
gazorezchika. Pod red. T.E.Grigor'eva. Izd. 2-oe. Moskva, Gos.
energ. izd-vo, 1957. 63 p.
(Gas welding and cutting)

~~YAKOBSON, Sargor, Sergeyevich; GRIGOR'YEV, T.Ye., redaktor; LARIONOV, G.Ye..~~
~~tekhnicheskly redaktor~~

[Manual for electric welders] Zamiatka elektrosvarshchika. Izd.
2-oe, perer. Pod red. T.N. Grigor'eva. Moskva, Gos.energ.izd-vo,
1957. 70 p.
(Electric welding)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2

GINZBURG-SHIK, L.D., inzh.; DZACHENKO, N.I., inzh.; YAKOBSON, S.S., inzh.

Cracks in pipe welds. Elek. sta. 29 no. 4:28-31 Ap '58.
(Welding) (MIRA 11:8)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961830010-2"

YAKOBSON, S.S., inzh.

Causes of crack formations in welded joints of high-pressure pipelines and their prevention. Energ. stroi. no.2:30-35 '59 (MIREA 13:3)

1. Glavenergostroymontazh Ministerstva stroitel'stva elektrostantsiy.
(Pipeline--Welding)

VINNITSKIY, David Yakovlevich; GINZBURG-SHIK, Lev Davidovich; ZAYDEL', Viktor Arnol'dovich, kand. tekhn. nauk.; ZAKHARASHEVICH, Anatoliy Aleksandrovich; KAPRALOV, Viktor Aleksandrovich; SOLOV'YEV, Vladimir Borisovich; CHULKOV, Sergey Pavlovich; YAKOBSON, Sergey Sergeyevich; KORIKOVSKIY, I.K., red.; ANTIKAYN, P.A., red.; VORONIN, K.P., tekhn. red.

[Handbook for the installation of heat engines and related equipment]
Spravochnik po montazhu teplomechanicheskogo oborudovaniia. Izd. 2.,
perer. Moskva, Gos. energ. izd-vo, 1960. 560 p. (MIRA 14:8)
(Heat engines)

S/096/63/000/002/008/013
E193/E583

AUTHORS: Yakobson, S.S., Zemlyanskaya, L.L. and Stasenko, I.V.

TITLE: On the problem of performance of welded joints in steam-supply lines of electrical power stations

PERIODICAL: Teploenergetika, no. 2, 1963, 64 - 69

TEXT: Analysis of service failures of welded joints at steam-power plants shows that low plasticity of the welds, not low strength, is the cause of the formation of cracks. High plasticity of the weld can be ensured by using suitable welding electrodes; this, however, would be bound to produce welds with relatively low UTS and creep strength, whereas the criterion generally used in selecting welding electrodes for this application is that their UTS and creep strength should be at least equal to those of the base metal. These conflicting requirements pose a problem which in its general form can be stated as follows: is it permissible to replace a short length of a steam pipe by material with a strength lower than that of the remainder of the pipe? Analytical solution of this problem presents considerable difficulties and, so far, no general method of calculation, which takes into account all

Card 1/3

On the problem of

S/096/63/000/002/C08/015
E193/E385

the service loads acting on a steam pipe, has been developed. Any solution of this problem must take into account the difference in both the mechanical properties at room temperature and the resistance-to-creep of the weld and the base metal. When the creep rate of the base metal is different from that of the weld, localized bending of the tube wall (the so-called 'edge effect') takes place in the welded zone. This effect can be analytically studied by using a step-by-step method in which the change in strain during a short time interval is determined from the state of stress at the moment immediately preceding the time interval under consideration, the resultant variation in stress being taken as proportional to the strain increment. Using this method, the present authors derived expressions with the aid of which stresses and strains in a tube in creep under a combined action of internal pressure and axial loads can be calculated. Although mathematically accurate, the method is cumbersome and requires the use of calculating machines. A simplified method of quantitative evaluation of stress and strain in a welded seam subject to both internal pressure and axial loads was also developed. Using this method, the authors

Card 2/5

On the problem of

S/096/65/000/002/008/013
E193/E383

Showed that if the welding electrode were more plastic (and weaker) than the tube material, the circumferential stresses in the weld under conditions of steady creep were lower than those in the tube and the strain in the weld in creep due to the combined action of internal pressure and axial loads would be lower than that in a simple tensile test. There are 6 figures.

ASSOCIATION: MF Orgenergostroya - MVTU

Card 3/3

YAKOBSON, S.S., inzh.; GLEZER, L.V., inzh.

Composite induction heater for thermal treatment of the welded
joints of steampipes. Elek.sta. 34 no.2834-37 F '63.
(MIRA 16:4)

(Steampipes-Welding)

369.11

S/149/62/000/002/008/008
A006/A101

K. 14/20

AUTHORS: Sklyarenko, S.I., Lavrov, I. I., Yakobson, S. V.

TITLE: Electrolytic deposition of tin-germanium and antimony-germanium
alloysPERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya,
no. 2, 1962, 129-134

TEXT: The authors studied the possibility of deposition of germanium as an alloying admixture combined with the production of coatings with binary Sn-Ge and Sb-Ge alloys. The coatings were deposited on a copper foil; graphite was employed as an anode. The authors studied the effect of germanium concentration in the electrolyte, cathodic current density and electrolyte temperature on the current efficiency and the basic indices of the process. The following conditions were established assuring the production of high-quality coatings. To obtain coatings with Sn-Ge alloy the authors recommend an electrolyte containing in g/l: 90 NaOH, 0.45 - 4.5 Ge in the form of GeO₂, 45 Sn (in the form of tetrachloride salt); $D_{0.5} = 0.5 - 1.5 \text{ amp/dm}^2$; $t = 65^\circ\text{C}$. Under these conditions high quality tin-germanium coatings up to 8μ thick are obtained, containing

Card 1/2

S/149/62/000/002/008/008
A006/A101

Electrolytic deposition of tin-germanium ...

10 - 51 weight % Ge. The current efficiency is 16 - 17%. The throwing power of the electrolyte attains 72%. For coatings with Sb-Ge alloys containing 1 - 12 weight % Ge the electrolyte should contain in g/l: 180 NaOH, 100 Na₂S, 2 - 10 Ge, 10 Sb. Current density from 0.25 - 2 amp/dm², and 40 - 60°C temperature are recommended. Maximum thickness of the coating is 6 - 7/ μ and the throwing power of the electrolyte attains 87%. The coatings showed high corrosion resistance in various media. There are 2 tables, 6 figures and 6 references: 4 non-Soviet-bloc and 2 Soviet-bloc.

ASSOCIATIONS: Moskovskiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Fine Chemical Technology); Kafedra tekhnologii redkikh i rasseyannykh elementov (Department of the Technology of Rare and Dispersed Elements)

SUBMITTED: July 10, 1961

Card 2/2

37637

S/076/62/036/005/012/013
B101/B110

26 1420

AUTHORS: Marina, L. I., Nashel'skiy, A. Ya., and Yakobson, S. V.

TITLE: Investigation of the vapor pressure of gallium-phosphide dissociation

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 5, 1962, 1086-1088

TEXT: The heat of formation and the vapor pressure on dissociation were determined for gallium phosphide, synthesized by zone melting of an unsaturated solution of gallium phosphide in gallium with phosphorus. The gallium excess remaining after the melting process was removed by dissolution in HCl in the presence of a platinum catalyst. X-ray analysis revealed only one phase, the data of which were consistent with publications. The vapor pressure was determined by the "dew-point method" as proposed by K. Weisser, (J. Phys. Chem., 61, 513, 1957). Although the change in color of the dissociated phosphorus from yellow to red interfered with the measurement it was possible, by quick cooling of the ampoule, to fix the point when condensation of the yellow phosphorus began. Results: (1) The vapor pressure of gallium-phosphide dissociation obeys the equation

Card 1/2

S/076/62/036/005/012/013
B101/B110

Investigation of the vapor ...

$\log P = -10,760/T + 9.996$. (2) At the melting point of gallium phosphide (1525°C), the vapor pressure is 13.45 atm. (3) The heat of formation of gallium phosphide is $49,511 \pm 2970$ cal/mole. There are 3 figures and 1 table. The most important English-language references are: D. Mandelkorn, Proc. 9, K. E., 47, 2012, 1959; G. Wolff, P. H. Keck and J. D. Broder, Phys. Rev., 94, 753, 1954; C. J. Frosch and L. Derick, J. Electrochem. Soc., 108, 1961.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkoy metallicheskoy promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry)

SUBMITTED: August 6, 1961

X

Card 2/2

ACCESSION NR: AP4034577.

8/0076/64/038/004/0891/0895

AUTHOR: Nashel'skiy, A. Ya. (Moscow); Ostrovskaya, V. Z. (Moscow); Yakobson, S. V. (Moscow)

TITLE: The equilibrium vapor pressure of phosphorus at the melting point of indium phosphide

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 4, 1964, 891-895

TOPIC TAGS: indium phosphide, phosphorus, vapor pressure, dissociation pressure, indium phosphide indium system, dew point method, static method, phosphorus molecularity

ABSTRACT: The dissociation pressure of indium phosphide was investigated by different methods described in the work by L. I. Marina, A. Ya. Nashel'skiy and S. V. Yakovson, (Zh. fiz. khimii, 36, 1086, 1962). The equilibrium vapor pressure of white phosphorus over an In-InP melt was determined by the dew point method. The dissociation pressure of InP at temperatures from 850-1070°C was measured in quartz ampoules. The authors feel the most accurate data on the vapor pressure of phosphorus in contact with molten InP was obtained by the static method,

Card

1/2

ACCESSION NR: AP4034577

measuring the pressure in ampoules provided with a quartz spiral vapor pressure of phosphorus over indium phosphide was found to be in the 40-45 atm. range, but more definite values could not be computed because of the dissociation pressure of the phosphorus existing as a four-atom molecule. The molecularity of the phosphorus vapor depends on the dissociation temperature of the molecules of phosphorus vapor and the association of the phosphorus atoms at high pressures. The deviation in the vapor pressure values found was considered to be not too great since the dissociation of the molecules of phosphorus vapor at high pressures is less than 10%. Orig. art. has: 3 tables and 1 figure.

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Equilibrium vapor pressure of phosphorus at the melting
point of indium phosphide. Zhur. fiz. khim. 38 no.4:891-
895 Ap '64. (MIRA 17:6)

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laser, INDIUM COMPOUND, PHOSPHIDE

ABSTRACT: Stimulated emission of InP diodes in the 9060—9080 Å region was compared with that of their GaAs counterparts (see Table 1). InP bars were prepared by the directed crystallization method in the form of large-size polycrystals grained in the direction of the bar axis. The bars were tellurium-doped with electron concentrations of $5 \cdot 10^{17} \text{ cm}^{-3}$. The diffusion of zinc from the gas phase into polished plates each containing 2–3 seeds took place at 750°C over a 30-min period. The depth of the p-n junction was 35 μ. The electrical contacts were made of gold which was sputtered on plates at 400°C. The bar ends were polished and the sides were roughly worked. The GaAs diodes were prepared in a similar manner with the following exceptions: diffusion of zinc into GaAs lasted 4 hr at 850°C under excess As pressure, and the resonator

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Table 1. Basic characteristics of InP and GaAs lasers

	InP	GaAs
Electron concentration in the n-region, cm^{-3}	$5 \cdot 10^{17}$	$5 \cdot 10^{17}$
Electron mobility in the n-region, $\text{cm}^2/\text{v}\cdot\text{sec}$	2000	3200
Concentration of zinc in the gaseous phase during diffusion, cm^{-3}	$3 \cdot 10^{18}$	$7 \cdot 10^{18}$
Diffusion temperature, $^{\circ}\text{C}$	750	850
Diffusion time, hours	0.5	4
Length of Fabry-Perot resonator, mm.	9070	8480
Wavelength of stimulated emission, Å	7200	940
Threshold current density, amp/cm^2	4700	630
Threshold current density after one surface is silvered, amp/cm^2	8	8
Loss factor α , cm^{-1}	$3 \cdot 10^{-3}$	$2.5 \cdot 10^{-2}$
Gain divided by current density, β , $\text{cm} \cdot \text{amp}^{-1}$		

surfaces and diffusion plane were produced by cleavage along the contact plane. The diffusion depth in both cases was almost identical. As regards the width of directivity, InP lasers ($5-7^{\circ}$) were shown to be superior to GaAs lasers ($14-19^{\circ}$) by a factor of 3 or 4. InP laser diodes were characterized by a low loss factor ($\sim 7 \text{ cm}^{-1}$)

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